PATENT COOPERATION TREATY

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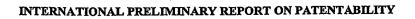
INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PE17223PC00	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/SE 2003/001067	International filing date *(day/month/year)* 19-06-2003	Priority date *(day/month/year)* 02-07-2002
International Patent Classification (IPC) or national classification and IPC G06F17/30, H04L9/00		
Applicant Telefonaktiebolaget L M Ericsson (publ) et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of __4__ sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

   a. ☒ *(sent to the applicant and to the International Bureau)* a total of __5__ sheets, as follows:

   ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

   ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s))

   _____ , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

   ☒ Box No. I   Basis of the report

   ☐ Box No. II   Priority

   ☐ Box No. III   Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

   ☐ Box No. IV   Lack of unity of invention

   ☒ Box No. V   Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

   ☐ Box No. VI   Certain documents cited

   ☐ Box No. VII   Certain defects in the international application

   ☐ Box No. VIII   Certain observations on the international application

Date of submission of the demand 09-01-2004	Date of completion of this report 15-10-2004
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer Ralf Boström /LR Telephone No. +46 8 782 25 00

Form PCT/IPEA/409 (cover sheet) (January 2004)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

Box No. I	Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

   ☐ This report is based on a translation from the original language into the following language _____ , which is the language of a translation furnished for the purposes of:

       ☐ international search (under Rules 12.3 and 23.1(b))

       ☐ publication of the international application (under Rule 12.4)

       ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

   ☐ the international application as originally filed/furnished

   ☒ the description:

       pages   **1-28** _____ as originally filed/furnished

       pages* _____ received by this Authority on _____

       pages* _____ received by this Authority on _____

   ☒ the claims:

       pages _____ as originally filed/furnished

       pages* _____ as amended (together with any statement) under Article 19

       pages*   **29-33** _____ received by this Authority on   **16-06-2004** _____

       pages* _____ received by this Authority on _____

   ☒ the drawings:

       pages   **1-8** _____ as originally filed/furnished

       pages* _____ received by this Authority on _____

       pages* _____ received by this Authority on _____

   ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

       ☐ the description, pages _____

       ☐ the claims, Nos. _____

       ☐ the drawings, sheets/figs _____

       ☐ the sequence listing *(specify)*: _____

       ☐ any table(s) related to the sequence listing *(specify)*: _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

       ☐ the description, pages _____

       ☐ the claims, Nos. _____

       ☐ the drawings, sheets/figs _____

       ☐ the sequence listing *(specify)*: _____

       ☐ any table(s) related to the sequence listing *(specify)*: _____

*   *If item 4 applies, some or all of those sheets may be marked "superseded."*

| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |

1. Statement

Novelty (N)	Claims	1-24	YES
	Claims	---	NO
Inventive step (IS)	Claims	1-24	YES
	Claims	---	NO
Industrial applicability (IA)	Claims	1-24	YES
	Claims	---	NO

2. Citations and explanations (Rule 70.7)

Documents cited in the International Search Report:

D1. Kristol, D. et al:"HTTP State Management Mechanism",
October 2000. Request for Comments: 2965.
D2. US 2002055912 A1

The present application is concerned with the problem how to
make sure that a user has acquainted the policy associated
with a certain cookie.

D1, which is considered to represent the most relevant state
of the art, discloses a way for an origin server to send state
information (cookies) to a user agent, and for the user agent
to return the state information to the origin server. The
information exchange is initiated by the origin server, which
sends a "Set-Cookie2 response header" to the client. The user
agent returns a Cookie request header, if it chooses to
continue the session (see chapter 3.2). The user agent rejects
cookies according to certain rules (see chapter 3.3.2).

The solution according to D1 allows the user to have
considerable control over cookie management. For example, the
user agent can present a dialog to the user before the user
agent accepts a cookie (see page 10, line 36-38). The user
agent may discard any cookie it receives that the user has
not, through some user agent mechanism, deemed acceptable
(page 11, line 6-8). Further more, for privacy reasons, a user
should be able to find out how a web site plans to use
information in a cookie and should be able to choose whether
or not those policies are acceptable (see chapter 6, line 1-
5). The server's cookie policies are described in the comment
attribute of the cookies. Thus, a user can inspect the
information to decide whether or not to accept the cookie (see
page 6, line 1-7).

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V

D2 is a background art document and is not considered to be of any particular relevance.

The invention differs from D1 in that the origin server in D1 is never informed whether the user has acquainted the provided policy report. This is in contrast to the invention, where the user agent receives the privacy policy from the origin server. There are no suggestions in D1 that would lead the skilled person to include this feature in the system in D1. Therefore, the invention claimed in claims 1-24 is novel, includes an inventive step and has industrial applicability.

CLAIMS

1.   A method of managing cookies in a data processing system (1) comprising a user agent (100) requesting a resource associated with a cookie from a content provider (200), said method comprising the step of said user agent (100) transmitting, in response to reception of a privacy policy associated with said cookie, a cookie-policy receipt to said content provider (200), said cookie-policy receipt specifying whether a user associated with said user agent (100) accepts that said content provider (200) provides said cookie to user equipment (300) associated with said user agent (200).

2.   The method according to claim 1, further comprising the step of including said cookie-policy receipt in a resource fetch message transmitted from said user agent (100) to said content provider (200).

3.   The method according to claim 1, further comprising the steps of:
    -    said user agent (100) comparing said received privacy policy with user preference, said user preference specifying a cookie privacy policy accepted by said user; and
    -    said user agent (100) generating said cookie-policy receipt based on said comparison.

4.   The method according to claim 3, wherein, if said received privacy policy does not fulfill said user preference, said method comprising the steps of:
    -    said user agent (100) presenting said received privacy policy for said user on said user equipment (300); and
    -    said user agent (100) generating, in response to a user-input signal, said cookie-policy receipt.

5.   The method according to claim 1, further comprising the steps of:
    -    said user agent (100) presenting said received privacy policy for said user on said user equipment (300); and
    -    said user agent (100) generating, in response to a user-input signal, said cookie-policy receipt.

6. The method according to claim 1, further comprising the step of authenticating said cookie-policy receipt with an authentication key (135; 355) associated with said user agent (100).

7. The method according to claim 1, wherein, if said cookie-policy receipt is specifying that said user does not accept that said content provider (200) provides said cookie to said user equipment (300), said method comprising the step of removing a stored cookie associated with said requested resource from a storage (330) in said user equipment (300).

8. The method according to claim 1, wherein, if said cookie-policy receipt is specifying that said user does not accept that said content provider (200) provides said cookie to said user equipment (300), said method comprising the step of ignoring a cookie request command transmitted from said content provider (200) to said user agent (100).

9. A method of providing cookies in a data processing system (1) comprising a user agent (100) requesting a resource associated with a cookie from a content provider (200), said method comprising the steps of:
   - transmitting a privacy policy associated with said cookie to said user agent (100); and
   - said content provider (200) providing, in response to reception of a cookie-policy receipt from said user agent (100), said cookie to user equipment (300) associated with said user agent (100) if said cookie-policy receipt is specifying that a user associated with said user agent (100) accepts that said content provider (200) provides said cookie to said user equipment (300).

10. The method according to claim 9, wherein said cookie-policy receipt is received in a resource fetch message transmitted from said user agent (100).

11. The method according to claim 9, wherein, if said cookie-policy receipt is specifying that said user accepts that said content provider (200) provides said

cookie to said user equipment (300), said method comprising the step of providing said cookie-associated resource.

12. A user agent (100) provided in a data processing system (1) for requesting a resource associated with a cookie from a content provider (200), said user agent (100) comprising means for transmitting (110), in response to reception of a privacy policy associated with said cookie, a cookie-policy receipt to said content provider (200), said cookie-policy receipt specifying whether a user associated with said user agent (100) accepts that said content provider (200) provides said cookie to user equipment (300) associated with said user agent (100).

13. The user agent according to claim 12, wherein said transmitting means (110) being adapted for including said cookie-policy receipt in a resource fetch message transmitted to said content provider (200).

14. The user agent according to claim 12, further comprising:
    - means for comparing (160) said received privacy policy with user preference, said user preference specifying a cookie privacy policy accepted by said user; and
    - means for generating (125), connected to said comparing means (160), said cookie-policy receipt based on said comparison.

15. The user agent according to claim 14, further comprising means for presenting (110) said received privacy policy for said user on said user equipment (300) if said privacy policy does not fulfill said user preference, said generating means (125) being adapted for generating said cookie-policy receipt in response to a user input signal.

16. The user agent according to claim 12, further comprising:
    - means for presenting (110) said received privacy policy for said user on said user equipment (300); and

-    means for generating (125) said cookie-policy receipt in response to a user input signal.

17. The user agent according to claim 12, further comprising means for authenticating (130) said cookie-policy receipt with an authentication key (135; 355) associated with said user agent (100).

18. The user agent according to claim 12, further comprising means for removing (140) a stored cookie associated with said requested resource from a storage (330) in said user equipment (300) if said cookie-policy receipt is specifying that said user does not accept that said content provider (200) provides said cookie to said user equipment (300).

19. A content provider (200) adapted for providing a requested resource associated with a cookie to a user agent (100) in a data processing system (1), said content provider (200) comprises:
-    means for transmitting (210), in response to a resource request from said user agent (100), a privacy policy associated with said cookie to said user agent (100); and
-    means for providing (230), in response to a cookie-policy receipt transmitted from said user agent (100), said cookie to user equipment (300) associated with said user agent (100), said cookie providing means (230) being adapted for providing said cookie if said cookie-policy receipt is specifying that a user associated with said user agent (100) accepts that said content provider (200) provides said cookie to said user equipment (300).

20. The content provider according to claim 19, wherein said cookie-policy receipt is received in a resource fetch message transmitted from said user agent (100).

21. The content provider according to claim 19, further comprising means for providing (240) said cookie-associated resource if said cookie-policy receipt is

specifying that said user accepts that said content provider (200) provides said cookie to said user equipment (300).

22. A system for managing cookies in a data processing system (1) comprising a user agent (100) requesting a resource associated with a cookie from a content provider (200), said system comprising:

- means for providing (240) a privacy policy associated with said cookie;

- means for transmitting (110) a cookie-policy receipt, said receipt transmitting means (110) being responsive to said privacy policy; and

- means for providing (230) said cookie in response to said cookie-policy receipt specifying that a user associated with said user agent (100) accepts that said content provider provides (200) said cookie to user equipment (300) associated with said user agent (100).